

ASJ
Work Order ID 97379

February-19-13 8:55:05 AM

97379

Page 1

Item ID: D4317-7

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: GPS Plate

Start Date: 2/19/13 Start Qty: 2.00

2

Cust Item ID:

Required Date: 3/05/13 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: MCS Date: 13-02-19 Tooling:

Date:

Run Start *NR1*

QC: Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4317

A

100

0.00

100

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg

4130, 063

Dwg Rev: A

Prog Rev: A

2-Deburr if necessary

2 4 Jm13-3-16

PTO ->

2nd Sheet Also

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control


2 4 Jm13-3-16

NCR: ☒ Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA  Date: 13/04/08QA Closed:  Date: 13/4/5

Work Order: <u>97379</u>	DISPOSITION Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D4317-7</u>		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input checked="" type="checkbox"/>
NCR No. <u>13-2456</u>		Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input checked="" type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input checked="" type="checkbox"/>	13-3-18	100	1x	PART DIMENSIONS WERE ALL TOO SMALL.	DAS 16 9.9	SCRAP + DESTROY	JM 13-3-18		DAS 16 9.9
Equip/Tooling <input type="checkbox"/>			42	FOUND INCORRECT DXF FILE.	ASZ042 13/04/01	Recall B# 103433		1341	ASZ042 13/04/01
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear	General	
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input checked="" type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input checked="" type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input checked="" type="checkbox"/> Other <u>NOT TO SCALE.</u>

Work Order ID 97379

February-19-13 8:55:05 AM

97379

Page 2

Item ID: D4317-7

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: GPS Plate

Start Date: 2/19/13 Start Qty: 2.00

2

Cust Item ID:

Required Date: 3/05/13 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00 13 4 1				2	2		
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <u>ST104</u> Memo	0.00 0.00							
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

270 ->

68 B-4-4

13/4/4

13-04-4

NCR: ☒ Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: <u>97379</u>	DISPOSITION Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D4317-7</u>		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input checked="" type="checkbox"/>	Engineering <input type="checkbox"/>
NCR No. _____		Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	13-3-18	100	2x	Heavy contamination on surface - scrap entire batch. - pitting was bad. B# 103433 SCRAPPED 3' x 6" (10 feet sq)	DAS 16 Q57042 13/04/01	SCRAP + DESTROY RECUT USING NEW MAT B# 125079 Qty x2	Jm 13-3-18	DAS 27 13/04/01	DAS 16 Q57042 13/04/01
Equip/Tooling									
Operator									
Material <input checked="" type="checkbox"/>									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs
<input type="checkbox"/> Cuffs	<input checked="" type="checkbox"/> Contamination
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio
	<input type="checkbox"/> Grain
	<input type="checkbox"/> Hardware
	<input type="checkbox"/> Inspection Incomplete
	<input type="checkbox"/> Instructions Incomplete/Unclear
	<input type="checkbox"/> Maintenance
	<input type="checkbox"/> Mislabeled
	<input type="checkbox"/> Misread
	<input type="checkbox"/> Offset
	<input type="checkbox"/> Out of Calibration
	<input type="checkbox"/> Out of Sequence
	<input type="checkbox"/> Outside Dimensions
	<input type="checkbox"/> Ovalized
	<input type="checkbox"/> Over/Under tolerance
	<input type="checkbox"/> Part Incorrect
	<input type="checkbox"/> Part Lost/Missing
	<input type="checkbox"/> Part Moved
	<input type="checkbox"/> Positioned Wrong
	<input type="checkbox"/> Power Loss/Surge
	<input type="checkbox"/> Pressure/Forced
	<input type="checkbox"/> Temperature/Cure
	<input type="checkbox"/> Weld
	<input type="checkbox"/> Wrong Stock Pulled
	<input checked="" type="checkbox"/> Other

Rusted Heavily - OLD BATCH.

Picklist Print

February-19-13 8:55:09 AM

Work Order ID: 97379

97379

Parent Item: D4317-7

D4317-7

Parent Item Name: GPS Plate

Start Date: 2/19/13

Required Date: 3/05/13

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 11.02.02 new issue DD ver:EC
11.03.07 as per dwg rev.a DD ver:EC

IPP Rev:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NS.063		Purchased	No			100	sf	10.0000	0.3906	0.822316			

M4130NS 063

4130 Sheet .063

**

1.0

Jm13316

Location

MAT019

~~103433~~

125079

Loc Qty

10

~~10~~

Loc Code

~~10~~

125079

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

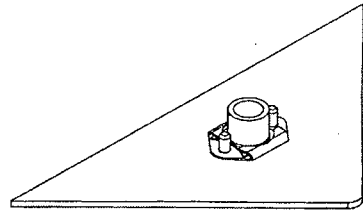
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
--	---	---

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

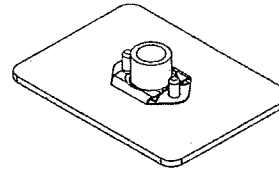
FAULT CATEGORY

Landing Gear	General	Grain	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled

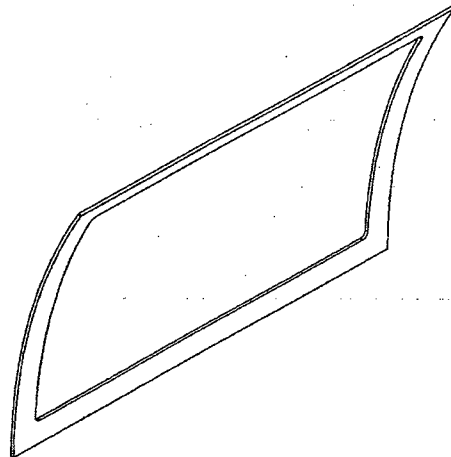
ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D4317-041	COVER PANEL RETAINER
		X	D4317-043	COVER PANEL RETAINER
1	1		D4317-9	PLATE
2		1	D4317-11	PLATE
3	2	2	MS20426AD3-4	RIVET
4	1	1	MS21075L4	NUT PLATE



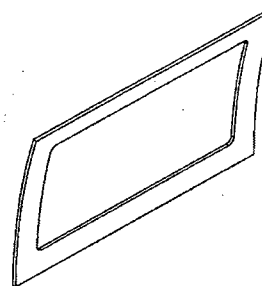
D4317-041 COVER PANEL RETAINER



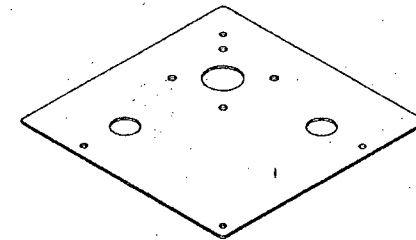
D4317-043 COVER PANEL RETAINER



D4317-1 VIEWING PLATE



D4317-3 WIRING PLATE



D4317-5 GPS PLATE
D4317-7 GPS PLATE

RELEASED
2011-03-02
JMD

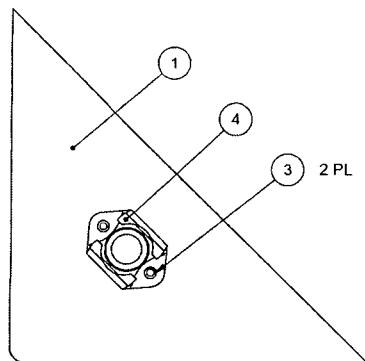
A	NEW ISSUE	AJS	11.02.03
REV.	DESCRIPTION	BY	DATE
DESIGN	CP		
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.02.03		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

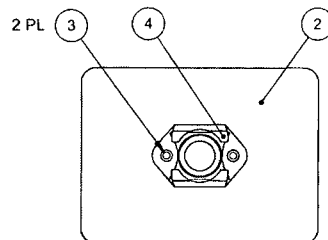
DRAWING NO. **D4317** REV. A
SHEET 1 OF 4
TITLE **PLATE** SCALE NTS

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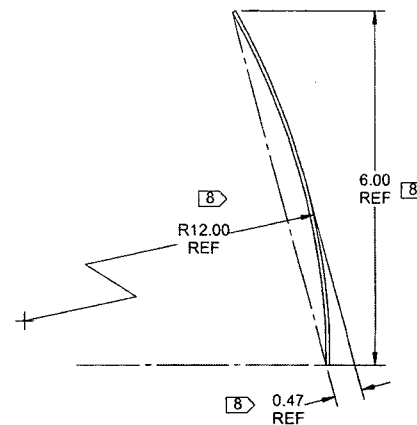
93379



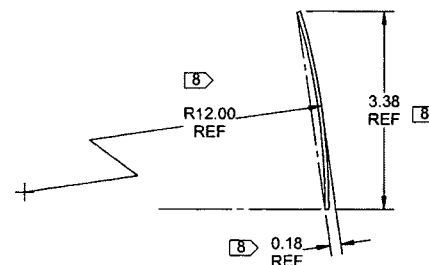
D4317-041 COVER PANEL RETAINER



D4317-043 COVER PANEL RETAINER



D4317-1 VIEWING PLATE



D4317-3 WIRING PLATE

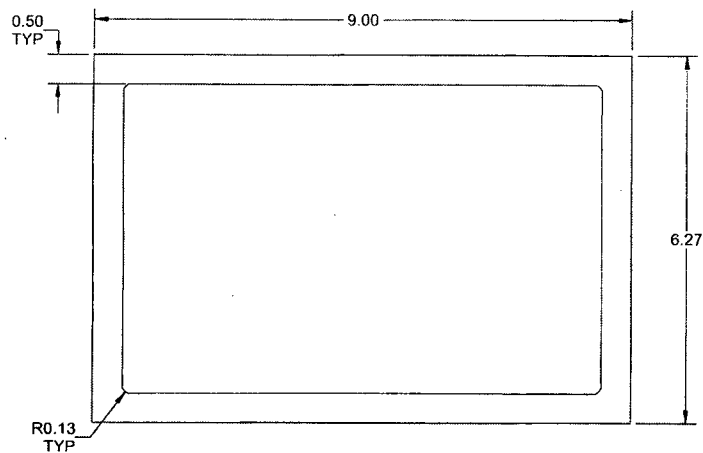
NOTES:

- 1) MATERIAL -1: MAKE FROM D4317-1F
-3: MAKE FROM D4317-3F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT -041: 0.1 lbs
-043: 0.06 lbs
-1 & -3: SEE FLAT PATTERN WEIGHTS
- 8) FINAL SHAPE TO BE DETERMINED AT ASSEMBLY

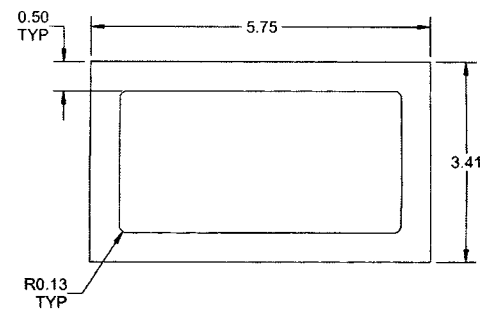
RELEASED
2011-03-02

DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4317	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		PLATE	NTS
DATE	11.02.03	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

97378



D4317-1F VIEWING PLATE



D4317-3F WIRING PLATE

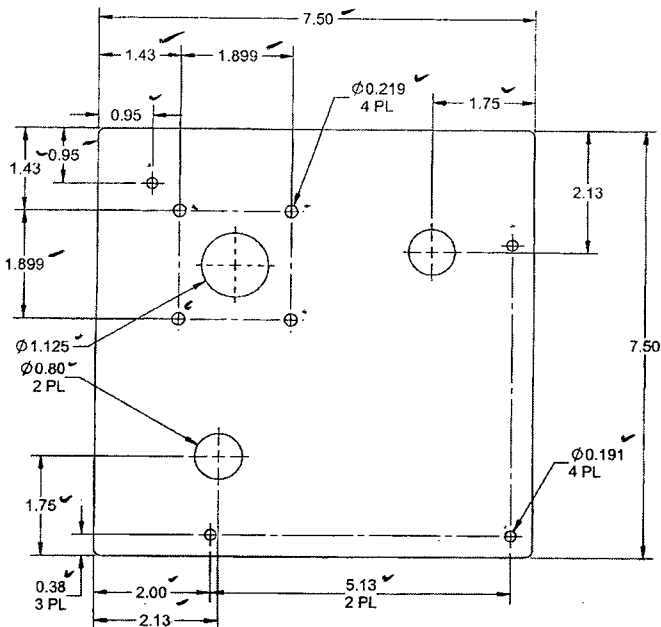
RELEASED
2011-03-13

NOTES:

- 1) MATERIAL -1F, -3F: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.060 THK
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF DART SPEC M304S16GA OR DART SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT -1F: 0.26 lbs
-3F: 0.14 lbs

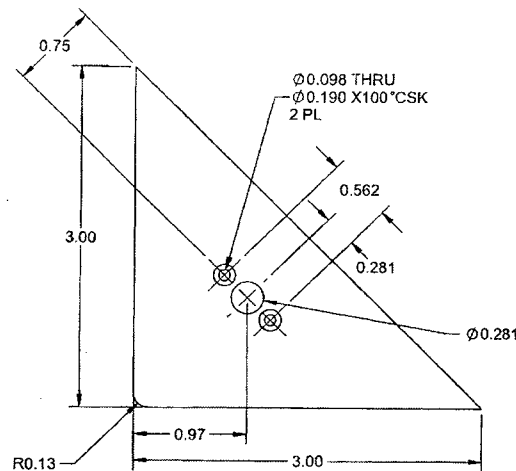
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	B	DRAWING NO.	REV. A
MFG. APPR.	[Signature]	D4317	SHEET 3 OF 4
APPROVED	[Signature]	TITLE	SCALE
DE APPR.	[Signature]	PLATE	NTS
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97378

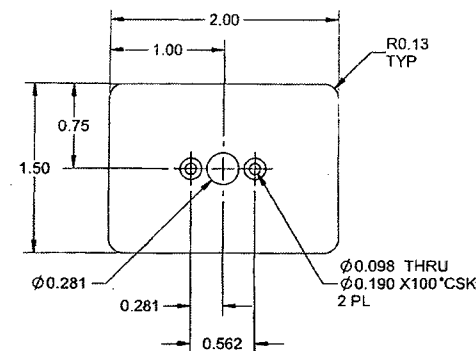


D4317-5 GPS PLATE

D4317-7 GPS PLATE



D4317-9 PLATE



D4317-11 PLATE

NOTE:

1) MATERIAL -5, -9 & -11: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.060 THK
PER MIL-S-8059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF DART SPEC M303S16GA OR DART SPEC M304S16GA

-7: AISI 4130N STEEL SHEET, 0.060 THK
PER MIL-S-18729 OR AMS 6350 OR AMS 6351
REF DART SPEC M4130N-S.060

2) FINISH -7: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NA
7) WEIGHT -5 & -7: 0.97 lbs
-9 & -11: SEE ASSEMBLED WEIGHT

RELEASED
2011-03-02


DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4317	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		PLATE	NTS
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DART AEROSPACE LTD		Work Order: 97379
Description: GPS Plate		Part Number: 04317-7
Inspection Dwg: 04317 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø 0.191"	+0.005"-0.001"	0.192"	-		V	Jkm
Ø 0.219"	+0.005"-0.001"	0.221"	✓		V	
Ø 0.80"	+0.010"-0.001"	0.802"	-		V	
Ø 1.125"	+0.012"-0.001"	1.127"	✓		V	
0.38"	+/- 0.030"	0.381"	✓		V	
1.75"	+/- 0.030"	1.753"	-		V	
1.899"	+/- 0.010"	1.899"	-		V	
1.43"	+/- 0.030"	1.401"	-		V	
0.95"	+/- 0.030"	0.954"	-		V	
0.95"	+/- 0.030"	0.955"	-		V	
1.43"	+/- 0.030"	1.431"	-		V	
1.899"	+/- 0.010"	1.901"	-		V	
1.75"	+/- 0.030"	1.754"	-		V	
7.50"	+/- 0.030"	7.505"	-		V	
2.13"	+/- 0.030"	2.129"	-		V	
7.50"	+/- 0.030"	7.507"	-		V	
Ø 2.00"	+/- 0.030"	2.001"	-		V	
2.13"	+/- 0.030"	2.128"	-		V	
5.13"	+/- 0.030"	5.129"	-		V	
0.060"	+/- 0.010"	0.063"	-		V	

Measured by:	Jm
Date:	13-4-1

Audited by:	
Date:	13-4-1

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	